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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/801,603	03/17/2004	Kazuo Motouchi	33959Wx0021	4184
441	7590	03/08/2006	EXAMINER	
SMITH, GAMBRELL & RUSSELL, LLP 1850 M STREET, N.W., SUITE 800 WASHINGTON, DC 20036			ROMAN, LUIS ENRIQUE	
			ART UNIT	PAPER NUMBER
			2836	

DATE MAILED: 03/08/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

HA

<b>Office Action Summary</b>	<b>Application No.</b>		<b>Applicant(s)</b>	
	10/801,603		MOTOUCHI, KAZUO	
	<b>Examiner</b>		<b>Art Unit</b>	
	Luis Roman		2836	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

**Period for Reply**

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

**Status**

- 1) ☒ Responsive to communication(s) filed on 17 March 2004.
- 2a) ☐ This action is **FINAL**.                      2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

**Disposition of Claims**

- 4) ☒ Claim(s) 5, 7 and 13-17 is/are pending in the application.
- 4a) Of the above claim(s) \_\_\_\_\_ is/are withdrawn from consideration.
- 5) ☐ Claim(s) \_\_\_\_\_ is/are allowed.
- 6) ☒ Claim(s) 5, 7 and 13-17 is/are rejected.
- 7) ☒ Claim(s) 6 is/are objected to.
- 8) ☐ Claim(s) \_\_\_\_\_ are subject to restriction and/or election requirement.

**Application Papers**

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on \_\_\_\_\_ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.  
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).  
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

**Priority under 35 U.S.C. § 119**

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All    b) ☐ Some \*    c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. \_\_\_\_\_.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

\* See the attached detailed Office action for a list of the certified copies not received.

**Attachment(s)**

- |  |   |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892)                        | 4) <input type="checkbox"/> Interview Summary (PTO-413)                     |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948)               | Paper No(s)/Mail Date. _____  |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>03/17/04</u> .  | 6) <input type="checkbox"/> Other: _____                                    |

## **DETAILED ACTION**

Applicant amendment filed on 03/17/04 has been entered. Accordingly claims 1-4 & 8-12 have been cancelled. New claims 13-17 have been added. The present application is a division of predecessor application (US Application 09/979081) filed in 09/16/01. A cross-reference statement has been added to the specification and also entered. All of these were included in the remarks.

### ***Objections***

#### ***Specification***

The applicant refers to the claims throughout the specification, the claims are written in legal terms, which may not be completely understood by one of ordinary skill in the art. The following list are the reference to the claims: page 6, line 8; page 7, lines 2, 19, 25; page 8, line 16; page 9, lines 11, 17, 19; page 10, lines 5, 12, 22; page 11, line 5. Appropriate correction is required.

The applicant refers throughout the specification to a “**silocco fan**” the device is known as “**sirocco fan**”. Appropriate correction is required.

### ***Abstract***

The title of the invention is not descriptive. A new title is required that is clearly indicative of the invention to which the claims are directed.

### ***Claim Objections***

**Claim 5** is objected to because of the following informalities: In line 6 there is a misspelled word “**pointe3d**”, it should be replaced by “**pointed**”.

Appropriate correction is required.

**Claim 15** is objected to because of the following informalities: **“silocco fan”**.

The device is known as **“sirocco fan”**.

Appropriate correction is required.

### ***Claim Rejections - 35 USC § 102***

The following is a quotation of the appropriate paragraphs of 35 U.S.C. §102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

**Claims 5, 7 & 14** are rejected under 35 U.S.C. 102(b) as being anticipated by Motouchi (US 5977716).

Regarding claim 5 Motouchi discloses an ion generator comprising: a casing having an intake port and an exhaust port (Col. 6 lines 58-60); an ionization electrode (Fig. 1 element 32) contained in said casing (Fig. 1 element 1), an including a first plate-like pole having a plurality of sawtooth-like pointed ends arranged linearly (Col. 5 lines 56-59 & Figs. 6, 7 element 32), and a second pole having a discharge surface defined by a cylinder or a part thereof and its generatrix extended in parallel with the pointed ends of the first pole (Figs. 6, 7 element 31 <the generatrix is a straight line thru which you move a circle -2 dimension- to generate a cylinder -3 dimension-, the generatrix here is the straight line that goes thru the centers of the intake and exhaust of the device, which is in parallel with the straight lines defined by the sawtooth-like pointed ends of the first pole), and a high-voltage generator for applying a high voltage to said ionization electrode (Col. 4 lines 56-59 & Fig. 1 element 2).

Regarding claim 7 Motouchi discloses the ion generator as claimed in claim 5. Motouchi further teaches wherein said first pole is formed with plural lines of pointed ends (Figs. 6, 7 element 32) whereas said second pole is disposed in correspondence to each of the lines of pointed ends (Figs. 6, 7 element 32 <the second pole has a cylindrical configuration and any straight line taking on its surface which is parallel to the generatrix will be in correspondence with the straight line defined by the lines of pointed ends>).

Regarding claim 14 Motouchi discloses the ion generator as claimed in claim 5. Motouchi further discloses which is provided in an air charging system for supplying air to an internal combustion engine (Abstract first paragraph).

### ***Claim Rejections - 35 USC § 103***

The following is a quotation of 35 U.S.C. §103(a), which forms the basis for all obviousness rejections, set forth in this Office action:

a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

**Claims 13 & 16** are rejected under 35 U.S.C. §103(a) as being unpatentable over Motouchi (US 5977716) in view of Suzuki (US 5296018).

Regarding claim 13 Motouchi discloses the ion generator as claimed in claim 5. Motouchi does not disclose wherein said first pole is formed from tungsten. Suzuki teaches wherein said first pole is formed from tungsten (Col. 4 lines 11-14). It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Motouchi device with the Suzuki device features because the tungsten poles have excellent strength, durability, mechanical and electrical properties.

Regarding claim 16 Motouchi discloses the ion generator as claimed in claim 5. Motouchi does not disclose wherein said intake port is provided with a dust filter whereas said exhaust port is provided with an air pump for discharging ionized air. Suzuki teaches wherein said intake port is provided with a dust filter (Col. 4 lines 51-60 Fig. 1 element 9) whereas said exhaust port is provided with an air pump (Col. 4 lines 51-60 Fig. 1 element 11) for discharging ionized air. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Motouchi device with the Suzuki device features because using pumps allows to exactly control the air flux at the exhaust port.

**Claim 15** is rejected under 35 U.S.C. §103(a) as being unpatentable over Motouchi (US 5977716) in view of Oie et al. (US 4541847).

Regarding claim 15 Motouchi discloses the ion generator as claimed in claim 5. Motouchi does not disclose wherein said intake port is provided with a dust filter whereas said exhaust port is provided with a sirocco fan for discharging ionized air. Oie et al. teaches wherein said intake port is provided with a dust filter (Col. 1 lines 7-10) whereas said exhaust port is provided with a sirocco fan (Col. 4 lines 33-35 Fig. 14 element 22) for discharging ionized air. It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Motouchi device with the Oie et al. device features because the utilization of a fan assists convection of heat for ions release.

**Claim 17** is rejected under 35 U.S.C. §103(a) as being unpatentable over Motouchi (US 5977716) in view of Patapoff et al. (US 5685980).

Regarding claim 17 Motouchi discloses the ion generator as claimed in claim 5. Motouchi does not disclose further comprising a solar panel for converting the radiation energy of the solar light to an electrical energy, and a power source section comprising a storage battery for storing the electrical energy.

Patapoff et al. teaches further comprising a solar panel for converting the radiation energy of the solar light to an electrical energy, and a power source section comprising a storage battery for storing the electrical energy (Col. 6 lines 46-48).

It would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the Motouchi device with the Patapoff et al. device features because the power source would be cleaner and cheaper being from solar sources.

**Claim 6** is objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

#### ***Allowable Subject Matter***

The following is a statement of reasons for the indication of allowable subject matter:

**Claim 6:** Motouchi discloses the ion generator as claimed in claim 5.

Motouchi does not disclose wherein said first poles are disposed at plural places arranged peripherally of said second pole as presenting their respective flat surfaces to a peripheral surface of the second pole.

Kusano et al. (US 5466424) discloses a corona discharge surface treating method with a similar casing and with an intake and exhaust. Kusano et al. further discloses a pair of electrodes located in the inner part of the casing (not the surface of it) (Fig. 1 element 4). In this patent it is also disclosed several configuration of electrodes including the configuration of a first plate-like pole and a second pole with a circular shape (Fig. 8).

Moreover, the first plate-like pole can be duplicated (once or more times) and as result have two or more flat poles surrounding the circular concentric pole. Since it has been held that mere duplication of the essential working parts of the device involves only routine skill in the art. See *In re Harza*, 274 F.2d 669, 124 USPQ 378 (CCPA 1960).

Motouchi discloses also the sawtooth-like pointed ends arranged linearly (Figs. 6, 7 element 32).

Even though all the elements are listed separately, the cited prior art individually and/or in combination fails to fairly disclose or suggest the combination of features claimed by applicant in claim 6, nor is there motivation to pick and chose from the various disclosed elements such features.

Any comments considered necessary by applicant must be submitted no later than the payment of the issue fee and, to avoid processing delays, should preferably accompany the issue fee. Such submissions should be clearly labeled "Comments on Statement of Reasons for Allowance."

### ***Conclusion***


Any inquiry concerning this communication or earlier communications from the examiner should be directed to Luis E. Román whose telephone number is (571) 272 – 5527. The examiner can normally be reached on Mon – Fri from 7:15 AM to 3:45 PM. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on (571) 272-2800 x 36. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from Patent Application Information Retrieval (PAIR) system.

Status information for unpublished applications is available through private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

LR/021406

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